

February 18, 2022

President & Board of Trustees  
c/o Greg Jackson, Village Manager  
Village of Long Grove  
3110 Old McHenry Road  
Long Grove, Illinois 60047

Re: Delay Estimated for Proposed Checker Rd Traffic Choker

Ladies and Gentlemen,

In order to estimate the effectiveness of a proposed choker on Checker Lane to reduce cut-through traffic from Lake Cook Rd to Arlington Heights Rd, GHA has performed a speed delay study on both the cut-through route and on an existing choker on Long Grove Rd. The following chart includes the results of the speed delay analysis of the cut-through route along Checker Rd and Schaeffer Rd in both the AM and PM peaks. Some delay is caused by the turning movement at the intersection of Schaeffer Rd and Checker Rd, but most delay is caused by the wait at the end of the corridor, either Eastbound traffic waiting for a green light at Arlington Heights Rd, or Southbound traffic waiting for a gap in traffic on Lake Cook Rd.

		Average Travel Time	Average Delay	Average Speed
AM Peak	Eastbound	200.5	38.5	22.4
	Westbound	184.1	22.1	24.4
PM Peak	Eastbound	185.6	23.6	24.2
	Westbound	227.5	65.5	19.8

GHA also evaluated the existing choker located on Long Grove Rd just East of Willow Valley Rd. The average delay caused by this choker when one opposing car existed was found to be 14.6 seconds, with 6.2 seconds being stopped delay waiting for the opposing car to clear the intersection and 8.4 seconds of deceleration and acceleration delay. Assuming each additional vehicle waiting to proceed through the choker would experience the 6.2 seconds of stopped delay the following chart of delay can be estimated:

Vehicle Queue	Deceleration / Acceleration Delay	Additional Delay	Total Choker Delay
0	8.4	2	10.4
1	8.4	6.2	14.6
2	8.4	6.2 x 2	20.8
3	8.4	6.2 x 3	27.0
4	8.4	6.2 x 4	33.2
5	8.4	6.2 x 5	39.4

Sincerely,  
Gewalt Hamilton Associates, Inc.



Ross J Haseman, P.E., PTOE  
Senior Signal Systems Engineer